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ABSTRACT

To help classroom teachers select materials for handicapped students, information is presented on 10 commercial instructional materials retrieval systems. Suggested are considerations in selecting instructional materials. Publisher's address, implementation information, and a brief description are given for the 10 systems, including the Behavior Resource Guide/Project Mainstream (with tests, materials, and instructional techniques linked to 266 outcome statements); Educational Patterns Incorporated (a card sorting system covering 22 subject areas); and Information System for Adaptive, Assistive, and Rehabilitative Equipment (a manual retrieval system of 666 equipment items made by 237 manufacturers). (CL)

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GUIDE TO FINDING APPROPRIATE INSTRUCTIONAL MATERIALS: EXISTING RETRIEVAL SYSTEMS

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PREFACE

The Massachusetts Materials Analysis Project (MMAP) is sponsored jointly by the Massachusetts Division of Special Education and the Northeast Area Learning Center and is coordinated by the Massachusetts Center for Program Development and Evaluation. The project's initial goal was to develop a process for evaluating instructional materials that could be used with handicapped students. However, the planning committee felt that a process which concentrated on describing materials would better aid teachers in finding materials appropriate to specific objectives required by the mandated state education plan form. This position was supported by the Massachusetts Division of Special Education. The Northeast Area Learning Center, willing to support alternative approaches, provided a grant to implement the project.

Initially, the project staff attempted to develop a model materials retrieval system that could be used by all local school personnel. As part of this effort, relevant material was collected and reviewed; in addition national experts were contacted for suggestions on the design of such a system. A seemingly endless amount of information on evaluating and describing materials was reviewed. Yet it was still not possible to make any significant modifications of what already existed. It was, therefore, decided to forgo attempts to develop a new system and instead to provide LEAs with information regarding existing instructional materials retrieval systems. The outside experts supported and encouraged this approach and the ALRC approved the revision of the project objectives.

A number of commercial retrieval systems exist. Each has its individual characteristics, advantages, disadvantages, etc. Generally, they provide excellent information. They also are usually in a better position than any SEA or federally funded support project to maintain an updating service. This document is the result of the project's efforts to compile descriptions of major existing retrieval systems. The descriptions, when possible were solicited from the systems' producers. The implementation information on each system represents the views of independent consultants and interviews with special education personnel currently using the system.

The project would like to thank the following people for their assistance:

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INTRODUCTION

The dynamic and at times, traumatic changes that have occurred in special education as a result of recent state (Chapter 766) and federal legislation (P.L. 94-142), have had a tremendous effect on the role of the classroom teacher. One result of these changes has been a shift in role from sole implementor of instruction to manager of the learning environment (materials, para-professionals, specialists, parents, etc.). This managerial role has required the development of a whole set of additional competencies. Among these is the selection of individually appropriate instructional objectives and materials. Materials selection in special education is a relatively new prerequisite skill because for many years there was only a limited selection of commercial materials that addressed the needs of special students from which to select.

This situation has changed rapidly in the last five years. There are now between 200,000 and 500,000 instructional materials commercially available. Many of these materials are designed specifically for students with special learning needs. The Educational Products Information Exchange (EPIE) reports that 75% to 90% of a student's time is spent with instructional media, and that teachers, during instructional periods, use printed media and materials 60% of the time and non-printed media 35% of the time (as reflected in four basic skill areas). The EPIE, however, also reports that less than 1% of a school budget is spent for instructional materials. Consequently, when teachers attempt to make wise use of small budgets for instructional materials, they are faced with an enormous number of products from which to choose.

The increase in the number of materials commercially available potentially makes individualization an easier process. These new resources offer two basic options that previously were only minimally available: first, to adopt a material as it is and second, to adapt (modify) the existing material to meet specific needs. Adapting commonly involves presenting the existing material in a revised order, at a variable rate, with additional cues, etc.

Although the amount of potential material available has changed, the procedure for selection has probably changed little; frequently, it likely continues to be a hasty, sight unseen buying procedure using product catalogues. The availability of various

materials at lending libraries has in some cases made it possible for teachers to try a material before purchase.

Instructional Materials and IEPs

The Federal requirements of Public Law 94-142 relating to Individualized Education Programs (IEP's) have added a new dimension to the materials selection maze. Contained in a student's IEP will be specific instructional objectives and information on the student's current level of performance, learning style, etc. Unfortunately, few commercial instructional materials currently provide these types of detailed descriptors. The teacher has to make a decision as to whether the materials (based on general goals) will be appropriate for the student's style and objectives.

Before the teacher can begin selecting materials for instruction, it is necessary to have a complete picture of the student's educational needs. Materials selection often is more appropriate when the teacher can state student's needs in terms of instructional objectives. Without this information, it is difficult to rationally select materials that will meet each student's needs in terms of instructional objectives. The individual assessment that allows the teacher to specify appropriate instructional objectives should also provide information relating to the student's learning style. Such information would include, how does the student most efficiently acquire information/skills; is the student a visual or auditory learner; how important are tactile experiences; and how does this learner best display newly acquired knowledge (verbally, graphically, etc.)? Once the teacher has this information, it is possible to begin determining the appropriateness of a material.

The general difficulty of materials selection is magnified by the lack of evaluation information and specification. Coupled with the vast amount of material available this creates an indisputable need for a system which organizes materials information so that those materials appropriate for a specific student can be easily identified. Such systems potentially offer educators of the handicapped the opportunity to find materials which can significantly improve the instruction offered. There are two major options available with regard to instructional materials retrieval systems: teacher developed systems and commercial systems.

Materials Selection Alternatives Available to Teachers

Teacher Developed Systems: Although publishers/producers may have a professional responsibility to provide the teacher/consumer with accurate information on a material (and the vast majority do just that), a "fair packaging law" for instructional materials is still in the future. In addition, it frequently takes considerable time to find the appropriate catalogue or brochure and then to read through the information. To save time and energy, it is usually necessary for the teacher to develop some type of materials information system.

For the classroom teacher to individually develop an information file on specific materials requires a tremendous amount of time and effort. One possible solution to this problem is the pooling of teacher efforts to describe materials. This pooling might be accomplished by having a standard form that a teacher could use to report on a material. This record could be kept in a central file in the resource room or the library that could be accessible to all teachers wanting to get information about a material.

When developing such a system, the teachers must decide exactly what format they want to use in their system. An important distinction must be made between evaluating a material and describing a material. Describing a material's characteristics (e.g., does it provide objectives, does it need additional equipment) is a time consuming activity but it may be far more useful than evaluation (did it work) information.

Because of the nature of instructional materials and the nature of students, the evaluation of instructional materials is somewhat akin to looking for the end of the rainbow. Learners are not static, neither are their needs nor are their teachers. Due to these and other factors, the evaluation of instructional materials is difficult and lack reliability with regard to universal application. What may have been evaluated as "excellent" by one teacher having used it with one student may be rated "totally unacceptable" by another teacher. The evaluation of the technical elements in instructional materials for which standardized criteria have been established (size of print, quality of color, etc.) is a more realistic possibility.

Commercial Systems: EJucational change, especially the demand for individualized instruction and resource accountability has resulted in the development of various commercial instructional materials information systems. The general purpose of these systems is to assist the teacher in finding specific instructional materials appropriate to a specific student's needs. The systems use various techniques (e.g., computers, light boxes), to provide varying amounts of information about materials on specific areas (assistive devices for the physically impaired) to broad clusters (language development and math).

The systems usually operate on the basis of matching student characteristics (objectives and learning style) to instructional materials characteristics. The matching of objectives is relatively simple; the objective of the student is matched to the material which purports to teach that objective. Secondary matches are made with regard to matching the learning style (auditory learners, one to one instruction, etc) to materials with similar charateristics. The underlying premise for this matching process is that the best match will most expedite the learning. Yet, despite the excellence of available materials, perfect matches between media and instructional objectives will not be possible in all instances. Teachers must be prepared to adapt materials to the specific student's needs.

Once the best match is accomplished, the information provided may be general (appropriate book or series) or succinct (page number, paragraph, etc.). Additional information regarding the technical characteristics (type of media, time for use, etc.) of the material is also often provided.

When considering the selection of a commercial retrieval system, the following questions must be considered:

1. for what skill areas (e.g., reading, mathematics) is information required?
2. will the system be used by one teacher, the school or the whole association?
3. how much does the system (and updates) cost?
4. are updates included and for how long?
5. can the system absorb teacher constructed materials?
6. is the format prepared so as to allow the identification of the best available material within five minutes?
7. does the use of the system require extensive training?
8. has the system been validated?
9. is the system and follow up service reliable?

By answering these questions, the advantages and disadvantages of each system can be identified. The most appropriate system will usually involve a compromise of what is needed and what is available.

Considerations in Selecting Instructional Materials

When considering a material that has been identified by a retrieval system, the teacher should ask certain questions. The questions should help the teacher determine the appropriateness of the materials with regard to instructional relevance, and practicality. Some questions might be:

1. Are instructional objectives stated?
2. Are there prerequisite skills required of the student to effectively use the material stated?
3. Are there prerequisite skills required of the teacher to effectively use the material stated?
4. Is the presentation mode appropriate for the student?
5. Does the instruction follow a logical sequence?
6. Are the directions complete and accurate?
7. Is the teaching strategy clearly and completely indicated?
8. Are storage and/or retrieval requirements prohibitive?
9. Will preparation time prevent regular use?
10. Is the answer key (if provided) useful or can one easily be constructed?
11. What student/teacher ratio is necessary to use the material?
12. Is the material capable of maintaining student interest?
13. Is the procedure for detecting errors and making corrections sufficient?
14. Is the material self correcting?
15. Is the stated mastery level (criteria for success) indicated?
16. Are there alternative approaches to using the material to attain the same objectives?
17. Is the material capable of maintaining instructor interest?
18. Is the material durable?
19. Is the teacher's guide (if one is provided) complete?
20. How often will it be necessary and how difficult will it be to replace consumable parts of the material?
21. Is validation information provided?
22. What are the strengths and weaknesses of the validation information if provided?
23. What is the cost/price/value estimate?
24. Are the materials technical aspects, i.e., size of print, quality of pictures, etc., acceptable?

Summary

There are advantages and disadvantages associated with all materials systems regardless of whether they are teacher developed or commercially developed. Each teacher or system should examine their needs and resources and then examine the available alternatives. An appropriate retrieval system can save tremendous amounts of time, energy and money. The selection of an inappropriare system can potentially waste these same resources.

COMMERCIAL RETRIEVAL SYSTEMS

BEHAVIOR RESOURCE GUIDE/PROJECT MAINSTREAM

Available from: Educational Progress Corporation
P.O. Box 45663
Tulsa, OK 74145

Together the Behavior Resource Guide and Project Mainstream provided a comprehensive learning system for handicapped students with mental ages from four to ten. The foundation for the system are 266 concise outcome statements - Desired Learner Outcomes (DLO's).

The Behavior Resource Guide (BRG) links the DLO's through Chart correlations to widely used and accepted psycho-educational tests and rehabilitative materials. More then 500 test items and over 1000 instructional items are cross-referenced to the DLO's. The information is presented on four sets of charts:

- DLO to Tests - each chart has two parts: 1) the specific coded DLO, standard identification and the learner response. 2) listing of the psycho-educational tests that correlate with the specific DLO.
- Tests to DLO - to identify which tests correspond with any one or more DLO's, simply locate the specific test and test area in the alphabetical test listing and locate the corresponding DLO.
- DLO to Media - DLO, standard identification and learner response to listing of the publishers materials that correlate with the specific DLO.
- Media to DLO - to identify which publisher's materials correspond with any one or more DLO, simply locate the publisher/material and locate the corresponding DLO.

Project Mainstream (of which the Behavior Resource Guide is a component) is designed to help the teacher implement instruction intended to obtain the targeted DLO's. For instruction, DLO's are grouped into three categories: Aural Skills, Visual Skills, and Social Emotional Skills.

In addition to the BRG, Project Mainstream consists of:

- Behavior Skills Inventory - provides a diagnosis of selected behavioral characteristics (DLO's) of a learner.
- Lesson Guides - present a variety of instructional activities which focus on behavior and that can be integrated into any teaching style.
- Audio Tapes/Activity Sheets - are lessons used for independent learning of DLO-related skills, or for reinforcing and extending teacher-directed instructional activities.

The complete Project Mainstream system costs $1,198.50. The BRG purchased separately costs $26.95.

Implementation Information

BRG's strong psychological orientation can present significant difficulties for teachers not trained in the complexities of psychological testing. It may be far more applicable to the needs of school psychologists.

BEHAVIORAL CHARACTERISTICS PROGRESSION (BCP)

Available from: VORT Corporation
P.O. Box 11132
Palo Alto, CA 94306
(415) 328-4366

BCP is a developmentally sequenced assessment program covering over 2,300 behaviors in six areas (e.g., self-help, mobility, visual/motor, language, social, vocational). The BCP was designed as a nongraded/aged based assessment instrument. Intended uses include curriculum development and staff/parent communication. The six areas are divided into 59 strands which progress from dependent to independent behaviors. BCP has been in operation approximately four years. It has an associated instructional materials base which is available in both manual and computerized formats.

The three components of BCP are:

- Observation booklet - contains all 59 strands and may be used for classroom observation of six students to establish baseline behaviors. This item costs $6.95.
- Charts (59 strands of three separate charts) - Provides visual display of an individual's progress. Useful in reviewing a student's progress with staff and parents. This item costs $3.95.
- Binder (each strand shown on separate page) - Intended to assist in planning and reporting individual progress on a daily basis. This item costs $8.95.

To help students use the materials listed above, VORT offers workshops on the BCP.

Implementation Information

Workshops for inservice training in the use of BCP may be arranged through VORT Corporation. They may be attended by up to 100 persons. The cost is $200 per day plus travel and expenses or travel and expenses only if more that $1500 of BCP materials are purchased.

EDUCATIONAL PATTERNS INCORPORATED (E.P.I.)

Available from: Educational Patterns, Inc.
62-83 Woodhaven Boulevard
Rego Park, NY 11374
(212) 476-0211

The E.P.I. Retrieval System uses a card sorting process which allows an educator to quickly locate educational material. Each card gives detailed information on a specific piece of instructional material or equipment. A minimal amount of instruction is required to train teachers in its operation. This system is being used in school districts, media centers, special education instructional centers (SEIMC), learning resource centers and other educational settings.

Each material in the system is carefully reviewed and coded on marginally punched cards. The information on these cards include: skills, format, grade level, entering skills, teacher/learner interaction, stimulus, objectives, interest level, time required, student response, summary of the material and its contents.

Material from 22 subject areas can be coded into the System. They are:

addition	multiplication
comprehension	numeration
division	oral reading
fractions/decimals/percent	perceptual skills
grammar	phonics
handwriting	reading readiness
language development	spelling
literature	structural analysis
math general	study skills
money/time/measurement	subtraction
motor skills	vocabulary

The E.P.I. Retrieval System is always custom designed. It is based on a system's own inventory on material holdings. As such, it directs teachers to those materials that are not only appropriate, but readily available as well. Another aspect of the System is a reference section containing information on approximately 11,000 items, from 250 publishers. This allows the teacher to look outside of the school's resources for additional material. A third aspect of the E.P.I. Retrieval System is a bank of 400 teacher designed ideas that have been used in the classroom. Teachers can add their own ideas to these by coding them on blank retrieval cards.

The system is updated on a continuous basis. As a system acquires new materials, EPI is sent a listing. Cards will then be prepared reflecting these new materials acquisitions. Usually within 2-3 weeks after the purchase of new items, cards are available for insertion into the Retrieval System.

The manual retrieval program utilizes 8½" X 11" key sort cards. The producer reports that approximately 20,000 different pieces of commercially available child-use instructional materials are covered by the program. The program operates with descriptors which are listed in the Guide; these are divided into eight sections: content, skills, format, grade level, interest level, stimulus mode, response mode, and interaction. Each instructional material included in the program is abstracted and coded utilizing descriptors located in the Guide. The appropriate terms assigned to a specific item are punched via holes around the outer edges of the card. The cards are in a random access and do not have to be returned in any specific order within an identified section. A sorting needle is used to remove cards (negative sort) which are not applicable to a request. The notched corner of the card must always be on the top right when sorting in order for retrievals to be accurate.

The retrieval process involves:
1. identification of sub-skills desired; remove designated cards behind divider.
2. with sorting needle, sort cards indicated by code in sub-skill section; place cards which remain on needle back in card file; cards which fall from needle contain sub-skills.

3. choose format descriptor and sort for that term.
4. similarly choose descriptors for grade level, interest level, stimulus, response and interaction and sort.
5. apply additional terms if desired, and sort.
6. cards which remain will contain, on the reverse side, abstracts of materials appropriate to the learning needs of the student for whom the match is being made.

The cost of the system is $2975. It is possible to purchase components separately. There is also a special system for materials relating to the education of the severely/profoundly handicapped available for $360.00. In addition, correlation of behavioral objectives to commercial materials can be arranged on a strict material basis with the cost varying between $60.00 to $85.00 per material.

Implementation Information

This system has the advantages of an inventory of the more popular programs and materials used across the country (the commerical tray), an inventory of school and/or Material Center instructional materials (the customized tray) and an inventory of teacher-made materials. The system also employs a relatively simple control system of "who has borrowed what". Additionally, the system can be learned in the relatively short period of approximately one hour.. The basis for selecting materials, the descriptor system, the sequence of skill building appears to be well developed.

EPI has the disadvantage of initially costing about $3000.00. This cost will provide the basic hardware plus the commercial tray. Additional costs are incurred in completing the inventories for school and teacher-made materials. Thus, this system may not be feasible for each school building, but would be feasible for a school district instructional materials center. However, encouraging classroom teachers to travel to a central location to select appropriate materials continues to be a problem.

FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM (FVTSS)

Available from: Richard L. Zweig Associates, Inc.
20800 Beach Boulevard
Huntington Beach, CA 92648
(714) 536-8877

The Fountain Valley Teacher Support System covers three subject areas: Reading (Grades K-6), Secondary Reading (Grades 7-9) and Numbers and Operations (Grades K-8).

Fountain Valley Teacher Support System in Reading (Grades K-6)

Published in three volumes (Primer & First Grade; Second & Third Grades; Fourth, Fifth and Sixth Grades). This system cross-references 330 programs from 92 publishers to 367 reading behavioral objectives. Each manual is organized first by skill area (phonetic analysis, structural analysis, vocabulary development, comprehension and study skills) and then by behavioral objectives sequenced by achievement level. Within each level and skill area, the specific prescription is categorized as to the type of media (textbooks; audio-visual materials; laboratory materials and kits; workbooks; spirit masters; games and activities). The cost of each volume is $19.95 and the three volume library costs $49.95. The Resource Guides are updated every two years through total revision. Inservice is not required.

Fountain Valley Teacher Support Systems in Secondary Reading (Grades 7-9)

Published in three volumes (Vocabulary Development, Comprehension and Study Skills), this volume cross-references 64 programs from 25 publishers to 61 reading behavioral objectives. Each manual is organized first by skill area (word meanings, structural analysis, vocabulary in the content areas, literal comprehension, interpretative comprehension, descriptive language, using reference sources, using the library and organizing information) and then specific behavioral objectives. Within each skill area and domain, the specific prescription is categorized as to type of media. The cost of each Resource Guide is $10.00, and the three volume library costs $24.95. The Resource Guides are up-dated and completely revised every two years. Inservice is not required.

The Fountain Valley Teacher Support System in Numbers & Operations (Grades K-8)

Published in one volume, this system cross-references 134 programs from 50 publishers to 373 basic math behavioral objectives. The manual is organized first by achievement level which is color-coded (K-Brown, 1-Red, 2-Orange, 3-Yellow, 4-Green, 5-Blue, 6-Purple, 7-Gray and 8-White), then by behavioral objectives which are presented sequentially. Within each level, the specific prescription is categorized as to type of media. The Resource Guide contains 21,150 prescriptions and costs $19.95. It is up-dated and totally revised every two years. Inservice is not required.

Implementation Information

The developer of FVTSS has made a significant commitment to keeping the system up to date (five revisions since 1971). An initial inservice of three hours is required for effective use of the system.

INDIVIDUALIZED CRITERION REFERENCED TESTING (ICRT)

Available from: Educational Progress Corporation
P.O. Box 45663
Tulsa, OK 74145

The Individualized Criterion Referenced Testing programs for Reading K-8 and Math 1-8 incorporate a system approach to testing. This system can be used as a teaching aid to improve instruction for students who are different in their educational progress toward specified goals. The system has the following characteristics:

- Provides the teacher with information regarding the skills the student can currently demonstrate and skills that the student should learn next.
- Identifies specific instructional resources teachers may use to teach the basic skills tested.
- Supplies necessary service and support for the successful introduction and practical use of the ICRT program.

ICRT is based on sets of instructional objectives for reading and math. Basic skills, common to the accepted curricula in both disciplines, have been selected as tests and arranged on a continuum; beginning with the most elementary and moving to the most difficult. The continuum for Reading involves 344 objectives while Math has 312 objectives.

ICRT provides three methods for measuring and monitoring each student's progress:

- Administering the ICRT program periodically to analyze each student's growth over a period of time.
- Using ICRT Benchmarks, an alternate set of validated test items in a nonconsumable, self-scoring format, to evaluate each skill taught.
- Recording information about objectives mastered in the Student Profile Folder to plan and report student progress week to week and year to year.

After the tests are scored by ICRT, the following reports are prepared:

- A Student Summary Report for each student tested, a diagnosis (objective by objective) listing those skills the student has learned, needs to review, and needs to learn next is provided In addition, a prescription, objective by objective, listing five instructional resources is provided. Separate prescriptions are given both for instruction and for enrichment and extention of skills mastered.

- An Instructional Grouping Report, for each group of students tested provides a list of those students who need instruction for each objective tested; the number who attempted and the number who passed each objective; and five prescriptions for each objective for instruction. A separate list of the approximate working level of each student within the group is also provided.

If testing is purchased, the teacher may specify three accessible basal materials; printouts for students will indicate specific pages in each title for instruction. Two additional items of products available from Educational Progress will be cited to make a total of five correlations of materials.

The two programs, Reading (Levels A-8) and Mathematics (Levels 1-8) are each sold separately by level ($59.00 per level). Each kit contains sufficient tests for an average size class, a Teacher's Manual, a scoring template, and an orientation cassette. Each kit contains booklets for the designated level and for two levels below, except Levels 1 and 2.

Implementation Information

ICRT total package approach (assessment, scoring, reports, etc.) in Reading and Math offers LEA's an alternative to particle systems. The system attempts to provide cost effective and rapid service without undermining creativity and flexibility.

INFORMATION SYSTEM FOR ADAPTIVE, ASSISTIVE, AND REHABILITATIVE EQUIPMENT

(ISAARE)

Available from: Adaptive Systems Corporation
1650 S. Amphlett Blvd. Suite 317
San Mateo, CA 94402

This manual retrieval system of adaptive, assistive, and rehabilitative equipment catalogues 666 items made by 237 manufacturers. The components of this system are:

- An Index-Glossary which classifies all equipment items according to how they relate to six basic developmental categories: interaction and communication with the surrounding environment; in-situ motion; travel; adaptation to and of the environment; rehabilitation or habilitation services; existence level. Using one of the six Index-Glossary books, an educator can determine the name of an item when the functional characteristics of the item cannot be related to its name. Additionally, the numerical section, i.e., 50,000 - 50,999, where the relevant items may be found in the locator is given with the equipment name.

- A Locator that includes a functional outline index, an alphabetical index, and an equipment item number cross-references to the manufacturer number index for each major category. At the rear of the Locator manual is a numerical list of manufacturer's names and addresses. The Locator can be used independently or in conjunction with the Index Glossary. The user may locate the item using any of the indices and obtain the ISAARE equipment number. The manufacturer(s) are located by cross-referencing the equipment number to manufacturer number.

- A File of Manufacturer's Catalogues is completed and maintained by each user of this system. Once the manufacturer(s) are identified by using ISAARE's system, the eudcator can locate the catalogue and decide on the appropriateness of the item. ISAARE provides a mailing list and a dummy letter from which to compile this file.

The purchase price for the system is $539.50 with updates available for between $15-25.

Implementation Information

This system provides a strong backup for facilities that serve physically handicapped students but have only limited access to physical therapist consultation. The major constraint on this system is maintaining the catalogue file.

NATIONAL INSTRUCTIONAL MATERIALS INFORMATION SYSTEM (NIMIS)

Available from: National Center for Educational Materials & Media for the Handicapped
Ohio State University
Columbus, OH 43210

NIMIS is a computer-based on-line interactive retrieval system specifically developed for the purpose of assisting teachers, parents, and other educators in locating information about special education instructional materials. NIMIS currently provides information on child-use instructional materials and teacher training materials, and eventually will include measurement, evaluation and prototype materials. NIMIS does not provide information on research, professional texts, or journal articles.

NIMIS is coordinated nationally by (NCEMMH) National Center on Educational Media and Materials for the Handicapped in Columbus, Ohio. NCEMMH provides every state and region access to materials information through their state department of education or Regional Area Center. In order to use NIMIS, an educator would contact the state or regional learning resource center. Persons at these centers can initiate a NIMIS search by either consulting printed NIMIS bibliographies, by contacting a nearby center that possesses a NIMIS terminal, or by contacting NCEMMH directly.

In order to make a thorough search, five specific items of information are requested: educational level of material needed, curricular area of general content area, specific concepts of skills in that area, format of materials needed, disabilities or handicapping conditions. To assist educators to pinpoint their need and thus receive the most pertinent information, NCEMMH has developed a thesaurus of descriptors (terms used to describe needed information). The general process is for the five items of information to be typed into the computer and all available appropriate materials will then be listed on a computer print-out sheet. This information is then delivered to the requestor.

At the present time, approximately 30,000 items are included in the instructional materials data base of NIMIS. No charge is made to the individual user for the services at this time. In addition, NCEMMH plans to disseminate the NIMIS information nationwide in the form of printed bibliographies that will be updated periodically, thus reducing the need for direct access to a computer terminal.

Implementation Information

Individual requests for information must be filtered through the local representative center of NCEMMH. This procedure may result in a significant time delay between the request and the response.

OHIO'S HANDICAPPED EDUCATION LEARNERS' PLANNING SYSTEM (HELPS)

Available from: Ohio's HELPS Coordination Center
1150 Beatrice Drive
Dayton, OH 45404

Ohio's HELPS is a computerized information storage and retrieval system of information about instructional resources for the teaching of handicapped children, the training of those working with handicapped children, and the training of curriculum consultants. HELPS is based on the Computer Based Resource Units (CBRU) model.

The System contains information about instructional materials (books, tapes, records, etc.), instructional activities (field trips, small group discussions, bulletin boards, etc.), behavioral objectives, and instructor support resources. Information about these resources are identified by selected objectives and learner performance characteristics (student - reading level, mental age, chronological age, interests, disability, etc.; professional - student age, type of teaching and resource type, etc.). Material descriptions include identification information, publisher, type of resource, and an abstract of teaching usage. Activities describe the instructional process in enough detail to permit the instructor to implement the process. The instructional objectives enable the instruction designer to develop criterion referenced test items for pre and post testing. Instructor's support information identifies instructor competencies needed and helpful pointers for implementing instruction.

The users of the System utilize manuals which contain objectives coded to a numerical access code. The manual also includes a listing of student characteristics with assigned codes which are used by the System to screen appropriate resources. Instructional materials can be coded by their location and availability from Instructional Resource Centers (IRC's) and the user of the System can identify which ones are available from those centers in this manner. The coding system allows the identification of materials in any material collection desired. A user without access to a terminal can complete a mail-in form or call to a site with a remote terminal, and have a search conducted for him. The results of these searches are produced by the computer center and mailed directly to the user.

Arrangements for renting the system including computer terminal rental and telephone services are made through the Battelle Memorial Institute.

Implementation Information

The principle advantage of this system is that it ties specific objectives and descriptors to a large data bank of materials and other support information. Cost-wise, this is not an expensive computer program. The terminal cost is approximately $90 - $120 per month rental. The cost of the service on a per minute basis is relatively low.

Due to the 24 hour a day access to the system, retrieval can be accomplished before or after normal work hours. A variety of other programs which can be used by a school district, including budget information, administrative simulations are also available from Battelle. This option makes the total system applicable to a wide variety of school personnel.

The HELPS program is dependent on the users keeping the data bank current. The program currently has extremely limited early childhood information.

PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM (PMRS)

Available from: B.L. Winch and Associates
P.O. Box 1185
Torrance, CA 90505
(213) 547-1240

PMRS is a retrieval system, available in manual and computer formats, which indexes and classifies approximately 10,000 currently available educational materials (an ultimate base of 25,000 materials is planned) from over 200 different publishers. Descriptors (located and defined in the Educational Descriptor Dictionary EDD) of the materials assist the user in locating materials by skill, format, grade level, reading level and mental age, and the stimulus-response characteristics. Once the search is narrowed through the use of the descriptors, a reading of the numbers displayed on a light box will allow the user to locate descriptors (title, publisher and analysis) of the specific materials in the eight volumes of the Descriptive Analysis Sheets (DAS).

Parts of the PMRS are: a light box, a set of Descriptor Cards punched via computer for accuracy, copies of the Educational Descriptor Dictionary, 8 Volumes of Descriptive Analysis Sheets, a Grid Overlay, and copies of New Materials and Publishers Guide which includes an alphabetical list of titles by publishers and a composite alphabetical list of all titles included in the System. An explanation concerning use of the System is included in the back of the EDD.

PMRS is available at a cost of $2,950.00 in the manual format and $3,950.00 in the computer format. Updates, which are available about every 18 months, may be secured at a cost of $500.00.

Implementation Information

This system was developed in the late 1960's by Dr. Gary Adamson, et al., at the Olathe Modulation Center in Olathe, Kansas. It was marketed by Select Ed Corporation. Currently over 250 PMRSs are in use around the nation. Most users are SEIMC/IMC/ISD type locations.

The system is easy to use and encourages preciseness in matching materials to learner characteristics. Purchasing the basic materials that make up the system can be extremely expensive (up to $25,000). If all the materials are not available, there can be many frustrating "blackouts". In addition, the system requires annual or biannual updating. This can be time consuming and expensive. Considerable training and refresher training is necessary to successfully use the system.

To maximize use of the system, teachers require significant inservice training. However, the thesaurus is inexpensive enough to distribute to individual teachers which increases efficiency. To set up the system usually requires at least two tables to accomodate it all.

SYSTEM FORE (Fundamentals, Operations, Resources, Environment)

Available from: FOREWORKS
7112 Teesdale Avenue
North Hollywood, CA 91605
(231) 982-0467

An educational management system, which contains a correlation of materials to specific learning objectives. System FORE was developed by the Los Angeles Public Schools. System FORE covers three skill areas: Language, Reading and Mathematics (six months through approximately ten years). The System helps a program developmentally and sequentially in instruction preparation and offers strategies for providing it.

Characteristics of the System are:

- a criterion-referenced, ordinally developmental guide
- a diagnosis/prescriptive assessment tool
- a materials' retrieval and a program delivery system
- a complete management information system for teachers

Each skill area consists of a separate set of color-coded printed materials. The materials consist of instructional objectives organized by Strands, Levels, and Items. Strands are major divisions of the three areas and are numbered consecutively. Language has four strands, 1-4; Reading has four strands, 5-8; and Mathematics has three strands, numbered 9-11. Levels are the developmental progressions of each sequence. Each instructional area is divided into 18 levels covering developmental learning from birth to 10 years of age. Items are specific skills and behaviors which become measurable objectives for students, and instructional guidelines for the teacher.

A diagnostic/prescriptive assessment tool is provided to aid teachers in identifying appropriate student objectives. System FORE provides lists of commercial instructional materials, color-coded to the sequences, that are relevant to the measured skill levels of the students and organized by Strand, Level and Items. Commonly available instructional materials are keyed for FORE's Developmental Sequence & Informal Inventories. Each objective has up to fifteen references listed. References are coded by the type of classroom learning center in which they might be best used. References are also coded by the mode of sensory input and by type of response. System FORE costs $47.25.

Implementation Information

System FORE helps assess a student's needs, identifies available materials to be prescribed, and specifies most test procedures. The detailed scope and sequence information for concepts and skill building, along with criterion-referenced diagnostic tests and key information to the available materials enable this to be done. In addition, the system is flexible, allowing sequences to be changed as necessary and varying test items as appropriate. This system assists the teacher who may be confused by the complexities of developing and implementing individual educational plans. Importantly the system's cost is low and encourages personal, yet easy, updating.

System FORE provides an inexpensive system into which just about any materials can be coded. Once the system has been established, it can be used to communicate from one teacher to another about a specific child's skills and level of accomplishment. This system can be used as simply or an in-depth as a teacher's skills and needs demand.

The disadvantages of the system are that it takes much time and effort to code all available material, and that the system must be updated by the user. Additionally, there is a need for workshops or in-service training in order to orient users to the system (the Quick Guide for System FORE can be used to reduce training time). Furthermore, the system usually requires a good deal of set up and storage space. Teachers who are not accustomed to making data based decisions may become overhwelmed with the amount of data this system can provide.

SKILTRAC

Available from: Center for Educational Innovation
750 Brooksedge Boulevard
Westerville, OH 43081
(614) 294-2531

Skiltrac, a computerized system that matches student needs with curriculum materials, was designed to promote Individual Educational Programming without taking excess time from teaching. At present the system areas cover only reading and math (k-3) although other areas will be incorporated in the future.

There are two major sections which comprise Skiltrac, the curriculum and the record keeping system. The curriculum is made up of entry level assessment - this is a screening device to identify deficit areas; specific skill assessment - for use before and after instruction to determine the degree to which a particular skill has been learned and instructional materials references - referencing of commercial materials to specific skills.

The record keeping system has five parts: Student Reporting Form - one form is filled out per student; Individual Assessment Plan - this is furnished by CEI upon receipt of the Student Reporting Form. Information is given for mastery level skills and frustration level skills; Individual Instructional Plan - suggested plan is provided by computer after receipt of student reporting form; Student Grouping Profile - is a status report for a given skill subcategory; Student Instructional Record - summary of pre and post assessment information.

Skiltrac is estimated to cost about $287.00 per teacher per year. This figure is based on teachers using Center for Educational Innovation materials, teachers serving six children and a minimum of two hundred teachers participating in the system over a three year period.

Implementation Information

To be cost effective the Skiltrac System requires a strong LEA commitment to implementation. The system must make a three year commitment to having two teachers use the system. In addition the LEA should be willing to use CEI developed instructional materials.

MATERIAL INFORMATION RETRIEVAL SYSTEMS

RETRIEVAL SYSTEM	AVAILABLE FROM	METHOD OF RETRIEVAL	SCOPE OF CONTENT	SIZE OF MATERIALS BASE	COST & UPDATE
Behavior Resource Guide/Project Mainstream	Educational Progress Corporation PO Box 45663 Tulsa, OK 74145	Manual matches of formal tests to objectives and objectives to materials using manuals	Assessment Materials Identification Instruction	cross reference of 500 test items & 1000 instructional items	Project Mainstream(include BRG)$1,198.50 BRG-$26.95
Behavioral Characteristic Progression (BCP)	VORT Corporation PO Box 11132 Palo Alto, CA 94306 (415) 328-4366	Manual/computer matches assessment results to materials	Assessment Materials Identification Instruction	covers over 2,300 behaviors in six areas (self-help, language, social)	Observation Booklet $6.95 Charts $3.95 Binder $8.95
Educational Patterns Incorporated (EPI)	Educational Patterns Inc. 62-83 Woodhaven Blvd. Rego Park, NY 11374 (212) 467-0211	Manual matches objectives to materials with a key sort	Materials Identification	over 10,000 items in language, math, motor, etc.	$2,975(initial) various plans available
Fountain Valley Teacher Support System (FVTSS)	Richard L. Zweig Assoc. 20800 Beach Blvd. Huntington Beach, CA 92648 (714) 536-8877	Computer	Assessment Materials Identification	Over 400 programs from more than 100 publishers; Reading and Math	Approximately $14.84 per student per year; manual customizing available
Individualized Criterion Referenced Testing (ICRT)	Educational Progress Corporation PO Box 45663 Tulsa, OK 74145	Computer	Assessment Materials Identification Instruction	80 Reading and 50 Math programs	Test kits - $59.00 per level Booklets $12.50/package(10 per package)

MATERIAL INFORMATION RETRIEVAL SYSTEMS

RETRIEVAL SYSTEM	AVAILABLE FROM	METHOD OF RETRIEVAL	SCOPE OF CONTENT	SIZE OF MATERIALS BASE	COST & UPDATE
Information System for Adaptive, Assistive and Rehabilitative Equipment (ISAARE)	Adaptive Systems Corporation 1650 S. Amphlett Blvd. Suite 317 San Mateo, CA 94402	Manual . glossary index . location . manufacturer's catalogues	Instructional - assists in finding appropriate rehabilitation equipment	237 manufacturers	$39.50
National Instructional Materials Information System (NIMIS)	National Center for Educational Materials & Media for the Handicapped Ohio State Univ. Columbus, OH 43210	Computer	Materials Identification	30,000 items in all areas	free to network clients; $25.00 per search
Ohio's Handicapped Education Learners Planning System (HELPS)	HELPS Coordination Center 1150 Beatrice Drive Dayton, OH 45404	Computer	Materials Identification		approximately $150-250 per month depending on usage
Prescriptive Materials Retrieval System (PMRS)	B.L. Winch & Assoc. PO Box 1185 Torrance, CA 90505 (213) 547-1240	Manual light box . color coded	Materials Identification	10,000 items 200 publishers	$2,950(initial) $ 500(update)
Skiltrac	Center for Educational Innovation(CEI) 750 Brooksedge Blvd. Westerville, OH 43081 (614) 294-2531	Computer	Assessment Materials Identification	CEI developed materials - reading and math	approximately $287.00 per teacher per year

MATERIAL INFORMATION RETRIEVAL SYSTEMS

RETRIEVAL SYSTEM	AVAILABLE FROM	METHOD OF RETRIEVAL	SCOPE OF CONTENT	SIZE OF MATERIALS BASE	COST & UPDATE
System FORE	FOREWORKS 7112 Teesdale Avenue North Hollywood, CA 91605 (213) 982-0467	Computer	Assessment Materials Identification	3000 items	$47.25 initial fee; customizing fee yearly

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